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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/505,580	02/16/2000	Peter Reimer	2981.P1/Ecore/core/mbe	5947
32588	7590	10/27/2003	EXAMINER	
APPLIED MATERIALS, INC. 2881 SCOTT BLVD. M/S 2061 SANTA CLARA, CA 95050			BUEKER, RICHARD R	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 10/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/505,580

Applicant(s)

REIMER ET AL.

Examiner

Richard Bueker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10, 12-24, 28, 30-38, 40 and 41 is/are pending in the application.
- 4a) Of the above claim(s) 1-8, 21-24, 28, 30-38, 40 and 41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10, 12-20 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Claims 10 and 12-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 10 as now amended recites a plurality of vacuum chambers, wherein each of the plurality of vacuum chambers includes at least one load-lock chamber and at least two transfer chambers, with each transfer chamber having a plurality of process chambers disposed in a radial fashion there around. The specification as originally filed, however, did not describe such an apparatus.

Claims 10, 12-16, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicants' description of the prior art taken in view of Huntley (6,397,883) and Hung (5,718,029), and in further view of van Os (5,792,272), Jevtic (5,928,389) and Maydan (5,882,165). Applicants' Fig. 1 (see also pages 2-4 of the specification) illustrates an apparatus for processing a substrate including at least two pumps, a process chamber, a load lock chamber and a transfer chamber. While Fig. 1 schematically illustrates the pumps located below the vacuum chambers, applicants describe (page 2, lines 23-25) the pump location as being in a "garage" in a remote location in the fabrication facility. Huntley (Fig. 1 and col. 1, lines 17-21 and 44-53) and Hung (Figs. 1-3 and col. 3, lines 23-30) each discloses a semiconductor fabrication facility in which a roughing pump arrangement is intentionally located directly below the vacuum processing apparatus that the pump is connected to, and therefore the pump

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arrangement is located in the envelope of the apparatus. Hung (col. 1, lines 25-27 and col. 3, lines 15-17) also teaches the use of a waffled concrete ceiling 14 for his pump enclosure that meets the limitations of claim 18. It would have been obvious to one skilled in the art to provide the pumps of Fig. 1 of applicants' specification directly below the processing apparatus that they service, in view of Huntley and Hung. It is noted that applicants indicate at page 3, lines 19-22 of their specification that they intend an "envelope" of space to be typically a rectangle defined by the components of the apparatus, and similar to a footprint. Since a rectangle is two dimensional, the envelope of space includes the space above and below the rectangle. It is noted that Huntley describes his clean room processing apparatus as being within the footprint of his service section (including vacuum pumps), which is on a level below the clean room. Also, it is noted that Hung (col. 3, lines 3-15) teaches that the space in which his pumps are located is a clean room as required by the claims. Also, van Os (Fig. 8), Jevtic (see Fig. 1 and cols. 1 and 2) and Maydan (see Fig. 20) each discloses a substrate processing apparatus having a plurality of processing chambers including at least one loadlock chamber and at least two transfer chambers, with each transfer chamber having a plurality of process chambers disposed in a radial fashion there around. The apparatus illustrated in Fig. 1 of Jevtic is the same as illustrated in applicants' Fig. 9B. Since Huntley and Hung teach that it is desirable to place pumps directly below a process chamber it would have been obvious to place the pumps associated with the chambers of Jevtic and Maydan directly below their associated vacuum chamber, within the space defined by the envelope of the vacuum processing chamber apparatus.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over applicants' description of the prior art taken in view of Huntley (6,397,883) and Hung (5,718,029), and in further view of van Os (5,792,272), Jevtic (5,928,389) and Maydan (5,882,165) for the reasons stated above, taken in further view of Hauff (5,769,626) or Kuribayashi (6,410,455), who both teach a step of providing a pump with wheels so the pump can be more easily moved. It would have been obvious to use wheeled pumps in the facilities of Huntley or Hung so the pump can be more easily moved, in view of the teaching of Hauff or Kuribayashi.

Applicants have argued that claim 10 has been amended to include parts of claim 14, which was objected to as being dependent upon a rejected base claim, but was indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. It is noted, however, that claim 10 was not amended to include all of the limitations of original claim 14, including all of the limitations of the base claim and any intervening claims. Also, claim 14 was amended to remove limitations that were present as originally filed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Bueker whose telephone number is (703) 308-1895. The examiner can normally be reached on 9 AM - 5:30 PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703) 308-1633. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Richard Bueker
Richard Bueker
Primary Examiner
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